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GERRIT H. SOEPENBERG

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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*Ex parte* GERRIT H. SOEPENBERG  
and RONALD M. TOL

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Appeal 2008-5116  
Application 09/329,391  
Technology Center 2600

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Decided:<sup>1</sup> March 19, 2009

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Before KENNETH W. HAIRSTON, JOHN A. JEFFERY  
and KARL D. EASTHOM, *Administrative Patent Judges*.  
HAIRSTON, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellants appeal under 35 U.S.C. § 134 from a final rejection of claims 1 to 8 and 10 to 14. We have jurisdiction under 35 U.S.C. § 6(b).

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<sup>1</sup> The two-month time period for filing an appeal or commencing a civil action, as recited in 37 C.F.R. § 1.304, begins to run from the decided date shown on this page of the decision. The time period does not run from the Mail Date (paper deliver) or Notification Date (electronic delivery).

We will reverse the lack of enablement rejection, sustain the nonstatutory subject matter rejection, and sustain the obviousness rejections.

Appellants have invented a transmission system for transmitting a multiplexed signal from a transmitter to a receiver. The multiplexed signal comprises a carousel having a plurality of modules. Each of the modules comprises at least one object that includes executable code. The receiver comprises extracting means for extracting objects from the multiplexed signal in dependence on module related information present in the multiplexed signal (Figs. 1 and 2; Spec. 2 to 4).

Claim 1 is illustrative of the claimed invention, and it reads as follows:

1. A transmission system for transmitting a multiplex signal from a transmitter to a receiver, said multiplex signal comprising a carousel having a plurality of modules each comprising at least one object that includes executable code, the receiver comprising extracting means for extracting objects from the multiplex signal, wherein the extracting means are embodied so as to extract the objects in dependence on module related information present in the multiplex signal.

The prior art relied upon by the Examiner in rejecting the claims on appeal is:

Wasilewski	US 5,420,866	May 30, 1995
Cobbley	US 5,614,940	Mar. 25, 1997
Kostreski	US 5,734,589	Mar. 31, 1998

The Examiner rejected claim 12 under the first paragraph of 35 U.S.C. § 112 for failing to comply with the enablement requirement.

The Examiner rejected claims 7 and 8 under 35 U.S.C. § 101 as being directed to nonstatutory subject matter.

The Examiner rejected claims 1 to 8, 10, 11, and 13 under 35 U.S.C. § 103(a) as being unpatentable over Wasilewski and Kostreski.

The Examiner rejected claim 14 under 35 U.S.C. § 103(a) as being unpatentable over Wasilewski, Kostreski, and Cobbley.

## ISSUES

### *(1) Enablement*

The Examiner contends that the specification does not provide sufficient details to enable a skilled artisan to make and use the claimed invention set forth in claim 12 because it does not adequately describe “how to insert/extract information into/from userInfo field of a DSM-CC DownloadInfoIndication message, as the message structure, generation and destination are not properly disclosed” (Ans. 3). The Examiner also contends that the “specification does not provide enough details about the structure and operation of the elements associated with the above identified claimed features to enable one skilled in the art to make and use the invention without undue experimentation” (Ans. 4). In response to the Examiner’s contentions:

Appellants disagrees [sic] since one skilled in the art would recognize and understand the structure of a DSM-CC downloadInfoIndication message. As pointed out in Appellants’ specification one skilled in the art knows the standards from ISO/IEC International Standard 13818-6, “MPEG-2 Digital Storage Media Command and Control” July 12, 1996. As pointed

out in the background of Appellants' specification this known standard describes to the extent practical the state of the prior art, which also provides an indication of the level of one skilled in the art.

Appellants' contend that the level of one skilled in the art includes the knowledge of the message structure, generation and destination and taken in conjunction with the disclosure in Appellants' specification, page 6, line 29 through page 7, line 2 one skilled in the art would have enough detail about the structure and operation of the elements associated with the claimed features in order for the skilled artisan to make and use the invention.

(Br. 6 and 7).

The issue before us, therefore, is have Appellants demonstrated that the Examiner erred in rejecting claim 12 for lack of enablement because of the lack of details in the disclosure concerning "the userInfo field of a DSM-CC DownloadInfoIndication message?"

*(2) Nonstatutory subject matter*

The Examiner contends that the "signal" in claims 7 and 8 does not fall within any of the four statutory subject matter categories (i.e., process, machine, manufacture, or composition of matter) (Ans. 4), and that the presence of the "computer readable medium" in the preamble of claim 7 does not change that fact because it is not referred to in the body of the claim (Ans. 8). Appellants argue *inter alia* that "[w]hile the guidelines<sup>2</sup> state that signals, *per se* are not included in one of the statutory categories of

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<sup>2</sup> The Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility, p. 57, OG Notice, Nov. 22, 2005.

invention, Appellants claim a multiplex signal, embodied in a computer readable medium” (Br. 9). Accordingly, the issue before us is have the Appellants demonstrated that the Examiner erred in finding claims 7 and 8 directed to nonstatutory subject matter in spite of the fact that the claimed “signal” is “embodied in a computer readable medium?”

*(3) Obviousness*

The Examiner and the Appellants agree that the transmission system in Wasilewski for transmitting a multiplex signal from a transmitter to a receiver lacks “a carousel having a plurality of modules each comprising at least one object that includes executable code” (Ans. 5; Br. 11). According to the Examiner (Ans. 5), “Kostreski teaches using a data carousel to create a customized program guide for users, as disclosed on col. 5, line 55 through col. 6 line 6, and downloading to the customer terminal an executable software/code to provide the customer with new services, as disclosed on col. 4 lines 39-66.” Based upon the teachings of Kostreski, the Examiner concludes (Ans. 5) that “[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to add using a data carousel and the objects including executable code of Kostreski to the system of Wasilewski to improve the system operation for the users by creating customized program guides and add new services to produce video/audio information outputs to the customer actions.” Appellants argue (Br. 11) that “[n]owhere does Kostreski teach or suggest that the executable software is contained in a module of a carousel as claimed by Appellants” (Br. 11), and that impermissible hindsight was used by the Examiner to establish the obviousness of the claimed subject matter (Br. 13). The issue

presented by the evidence and arguments is whether the Appellants have demonstrated that the Examiner erred in finding that Kostreski teaches a carousel of modules comprising at least one object that includes executable code, and whether it would have been obvious to the skilled artisan to provide such teachings to the transmission system described by Wasilewski?

## FINDINGS OF FACT

### *(1) Enablement*

1. As indicated *supra*, Appellants' acknowledge that the disclosed and claimed transmission system is known from ISO/IEC International Standard 13818-6, MPEG-2 Digital Storage Media Command and Control DSM-CC July 12, 1996.

2. Appellants' disclosure indicates that DSM-CC object carousels are known for broadcasting interactive applications (Spec. 1).

3. The referenced portion of Appellants' disclosure that bridges pages 6 and 7 of the Specification reads as follows:

Another advantage is that it is easy to find out which modules should be pre-fetched. The service provider periodically broadcasts a message listing the modules that are part of an object carousel, the 'DownloadInfoIndication' message. This message contains for each module a 'ModuleInfo' structure. This structure has a field 'userInfo'. The DSM-CC standard does not specify the use of this field; it is meant as an extension mechanism. This 'userInfo' field can easily contain the module tags. Thus, the set-top box retrieves the 'DownloadInfoIndication' message(s), and compares for each module the listed tags (in the 'userInfo' field) with the tags in

the filter. If a tag matches, it pre-fetches the module.

*(2) Nonstatutory subject matter*

4. Claims 7 and 8 are directed to a multiplex signal embodied in a computer readable medium.

*(3) Obviousness*

5. As indicated *supra*, Appellants' disclosed and claimed invention is directed to a transmission system for transmitting a multiplex signal from a transmitter to a receiver. The multiplex signal comprises a carousel having a plurality of modules each comprising at least one object that includes executable code.

6. Wasilewski describes a transmission system for transmitting a multiplex signal from a transmitter 198 to a receiver 204. The multiplex signal comprises a plurality of modules comprising at least one object. The receiver 204 comprises extracting means for extracting objects from the multiplex signal, and the extracting means is embodied so as to extract the objects in dependence on module related information present in the multiplex signal (Figs. 2, 6, 8A and 8B; col. 5, l. 30 to col. 8, l. 30; col. 13, ll. 35 to 65; col. 16, l. 65 to col. 18, l. 5).

7. Kostreski describes a transmitter carousel that continually broadcasts executable software code and data in multiplexed signal packets that are received by a digital entertainment terminal (DET) receiver 100 to optimize access to selected services from service providers (Abstract; col. 5, ll. 33 to 66).

8. The DET receiver 100 in Kostreski contains a demultiplexer 127 that recognizes a transported packet, and forwards the packet to CPU 105 for



further processing (Fig. 1; col. 28, ll. 8 to 18). The CPU recognizes certain ones of the demultiplexed packets as containing executable code, and loads this executable code into system RAM 122 as an executable (col. 28, ll. 18 to 20). The CPU further recognizes the other demultiplexed packets as processable data that is also loaded into RAM 122 (col. 28, ll. 21 to 23).

9. Cobbley describes a situation wherein an old version of a program is continuously used until a newer version of the program is cached (col. 9, ll. 20 to 33).

## PRINCIPLES OF LAW

### *(1) Enablement*

In order to enable the claims pursuant to Section 112, the specification must teach those of ordinary skill in the art “‘how to make and use the full scope of the claimed invention without undue experimentation.’” *Bruning v. Hirose*, 161 F.3d 681, 686 (Fed. Cir. 1998). Some experimentation is permissible although it cannot be unduly excessive. *Hybritech, Inc. v. Monoclonal Antibodies, Inc.*, 802 F.2d 1367, 1384 (Fed. Cir. 1986).

If the Office meets its initial burden of establishing a case of lack of enablement, “the burden then shifts to the applicant to provide suitable proofs indicating that the specification is indeed enabling.” *In re Wright*, 999 F.2d 1557, 1561-62 (Fed. Cir. 1993).

### *(2) Nonstatutory subject matter*

“A transitory, propagating signal . . . is not a ‘process, machine, manufacture, or composition of matter.’” *In re Nuijten*, 500 F.3d 1346, 1357

(Fed. Cir. 2007), *reh'g en banc denied*, 515 F.3d 1361 (Fed. Cir. 2008), *cert. denied*, \_\_\_ U.S. \_\_\_, 127 S. Ct. 70 (2008).

*(3) Obviousness*

The Examiner bears the initial burden of presenting a prima facie case of obviousness. *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). If that burden is met, then the burden shifts to Appellants to overcome the prima facie case with argument and/or evidence. *See id.*

The Examiner's articulated reasoning in the rejection must possess a rational underpinning to support the legal conclusion of obviousness. *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

ANALYSIS

*(1) Enablement*

As indicated *supra* in the findings of fact (FF 1 and 2), Appellants' disclosure clearly explains that a standard DSM-CC protocol is used to communicate object extraction messages from the transmitter to the receiver. Appellants' disclosure is equally clear that the portion of the object extraction message that informs the receiver as to which of the object(s) in the object carousel are to be extracted is designated by the message tag portion "userInfo field" of a standard DSM-CC "DownloadInfoIndication" message (FF 3). Appellants' claim 12 is merely directed to a standard extraction message sent from the transmitter to the receiver, and is not directed to a technique for inserting/extracting information into and from the "userInfo field" of a DSM-CC "DownloadinfoIndication" message as suggested by the Examiner. Since Appellants' acknowledge that they are

using a standard DSM-CC extraction message, we see no need for the Appellants to provide any additional details concerning the “structure and operation” of the message as suggested by the Examiner in order for the disclosure to be enabling. In summary, Appellants have provided “suitable proofs indicating that the specification is indeed enabling.” *Wright*, 999 F.2d at 1561-62.

*(2) Nonstatutory subject matter*

As indicated *supra* (FF 4), claims 7 and 8 are directed to a signal (i.e., multiplex signal embodied in a computer readable medium). Appellants’ arguments (Br. 9) that claims 7 and 8 fit within at least one of the four statutory subject matter categories under 35 U.S.C. § 101 are without merit in view of the *Nuijten* decision which held that a “transitory, propagating signal” does not fit within any of the four statutory subject matter categories. Accordingly, we agree with the Examiner that claims 7 and 8 are directed to nonstatutory subject matter.

*(3) Obviousness*

As indicated *supra*, the reference to Wasilewski describes all of the claim 1 transmission system structure except for “a carousel having a plurality of modules each comprising at least one object that includes executable code” (FF 6). The reference to Kostreski describes a digital entertainment terminal (DET) transmitter that continually transmits multiplex signals in a carousel comprised of executable software code and data in multiplexed signal packets that are received by a receiver 100 to optimize access to selected services from service providers (Abstract; col. 5, ll. 33 to 66) (FF 7). The DET receiver 100 in Kostreski contains a

demultiplexer 127 that recognizes a transported packet, and forwards the packet to CPU 105 for further processing (Fig. 1; col. 28, ll. 8 to 18) (FF 8). The CPU 105 in Kostreski recognizes certain packets as containing executable code, and loads this executable code into system RAM 112 as an executable (col. 28, ll. 18 to 20). The other demultiplexed packets are also loaded by the CPU 105 into RAM 122 (col. 28, ll. 21 to 23). The executable code and other packet data allow the user of the DET to download broadband services (e.g., interactive games and home shopping). In view of the noted teachings by Kostreski, we disagree with the Appellants' argument (Br. 11) that "[n]owhere does Kostreski teach or suggest that the executable software is contained in a module of a carousel as claimed by Appellants." Inasmuch as we agree with the Examiner's position (Ans. 5) that it would have been obvious to the skilled artisan to apply the executable software contained in a module of a carousel teachings of Kostreski to the receiver in the transmission system of Wasilewski to improve the system operation for users by adding interactive broadband services, we, therefore, disagree with the Appellants' argument (Br. 13) that the Examiner had to resort to impermissible hindsight to demonstrate the obviousness of the claimed subject matter set forth in claim 1.

With respect to claims 2, 4, 6, and 8, the packets transmitted to the receiver in Kostreski are "contained in a single information section" (FF 7).

With respect to claims 3, 5, 7, 10, 11, and 13, Appellants rely on the same arguments presented for claim 1 (Br. 13 to 15).

Turning lastly to claim 14, we disagree with Appellants' argument (Br. 16) that Cobbley does not describe a receiver that "does not pre-fetch a

module if the receiver has a stored module having the same pre-fetch tag and version-identifying information.”” As indicated *supra* (FF 9), Cobbley continuously uses an old version of a stored program until a newer version of the program is cached.

### CONCLUSIONS OF LAW

The Appellants have established that the Examiner erred in rejecting claim 12 for lack of enablement.

The Appellants have not established that the Examiner erred in rejecting claims 7 and 8 for being directed to nonstatutory subject matter.

The Appellants have not established that the Examiner erred in rejecting claims 1 to 8, 10, 11, 13, and 14 for obviousness.

### ORDER

The lack of enablement rejection of claim 12 is reversed.

The nonstatutory subject matter rejection of claims 7 and 8 is affirmed.

The obviousness rejections of claims 1 to 8, 10, 11, 13, and 14 are affirmed.

Appeal 2008-5116  
Application 09/329,391

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED-IN-PART

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